

# ALTEC LANSING®

PROFESSIONAL

## DX1012-8A



### FEATURES - THE ALTEC LANSING DIFFERENCE

- Point-source single magnet structure Duplex® design
- Large Format HF Driver (1.4" exit, 2.8" diaphragm)
- 90° conical high frequency horn
- 12"/300 mm direct radiator low frequency speaker
- Passive crossover network with Neutrik Speak-On® and barrier strip connectors
- 13-Ply Paintable Poplar Enclosure offered in Charcoal Gray or White with contrasting cloth-covered metal grille
- Eyebolt Hanging Hardware included
- Neutral grille cloth included that can be dyed to match any décor

### GENERAL PRODUCT DESCRIPTION

Houses of Worship and Auditoriums require speaker systems that can accurately reproduce the human voice and not miss a beat when the task is live or recorded high fidelity music. Standard two-way speaker systems are adequate, but suffer from cancellations and interference from adjacent HF and LF sources. Altec Lansing's solution is a Duplex® single magnet, point-source component that minimizes these cancellations without sacrificing speech intelligibility or high fidelity, full-range music reproduction.

The DX1012-8A uses a unique Duplex® ENGINE component featuring a large format high frequency driver and a 12"/300 mm low frequency speaker & voice coil mounted to the front of the same magnet structure. This point-source design means that all of the acoustic energy is generated in a 1.5" space. The high frequency driver is mated to a 90° conical high frequency horn, insuring smooth coverage across the rated bandwidth.

A 13-ply poplar paintable cabinet has internal reinforced L-brackets presenting multiple suspension options (horizontal and vertical orientation). Three forged eyebolts are included with each speaker. The model DX1012-8A-G is a charcoal gray painted cabinet with contrasting light gray cloth covered metal grille.

The DX1012-8A-W is a white cabinet with contrasting beige cloth covered metal grille.

Should you need to paint the cabinet to match the décor of the facility, a piece of neutral grille cloth is included with each speaker. This grille cloth can be dyed to match the speaker cabinet color, or to integrate the frontal area of the cabinet into the architectural space.

Where extended low frequency performance is required in Auditorium and House of Worship systems, the Altec Lansing Professional model LF115-8A single 15" flyable subwoofer provides an excellent complement to the DX1012-8A.

### FREQUENCY RESPONSE <sup>1,2</sup>

70 Hz - 16 kHz (±3 dB)

### USABLE LOW FREQUENCY LIMIT (-10 dB) <sup>1,2</sup>

45 Hz

### SENSITIVITY <sup>3</sup>

97 dB SPL

### POWER HANDLING <sup>4</sup>

300 W continuous; 1,200 W peak

### MAXIMUM OUTPUT (1 m) <sup>5</sup>

122 dB SPL continuous; 128 dB SPL peak

### COVERAGE ANGLES <sup>6</sup>

90° (horizontal) x 90° (vertical)

### DIRECTIVITY FACTOR, Q <sup>6</sup>

11.11

### DIRECTIVITY INDEX, Di <sup>6</sup>

11.46 dB

### TRANSDUCER COMPONENTS

LF: 1x 12 in. Woofer in a Vented Enclosure

HF: 1x 1.4 in. Exit Compression Driver

### IMPEDANCE <sup>7</sup>

Nominal: 8.0 Ω

Minimum: 6.1 Ω at 190 Hz

### CROSSOVER FREQUENCY

Passive LF - HF: 1,500 Hz

### HARMONIC DISTORTION <sup>8</sup>

1% rated power

2nd Harmonic 0.38%

3rd Harmonic 0.48%

THD 0.81%

10% rated power

2nd Harmonic 1.14%

3rd Harmonic 0.78%

THD 1.57%

### INPUT CONNECTIONS

1x 4 position barrier strip and 2x NL4

### ENCLOSURE MATERIALS & FINISH

18 mm, 13 ply Poplar Plywood Finished with Catalyzed Polyurethane

### SUSPENSION SYSTEM <sup>9</sup>

Working Load Limit (maximum weight applied to uppermost mounting point): 250 lbs. (113.6 kg)

(12) 3/8 in.-16 Threaded Mounting Suspension Points (3 each top & bottom and 2 each sides & back)

### DIMENSIONS

Net

22.00 in. (H) x 18.75 in. (W) x 15.00 in. (D) x 7.25 in. (W rear)

559 mm (H) x 476 mm (W) x 381 mm (D) x 184 mm (W rear)

Shipping

25.5 in. (H) x 23 in. (W) x 20 in. (D)

648 mm (H) x 584 mm (W) x 508 mm (D)

### WEIGHT

Net

55 lbs. (25.0 kg)

Shipping

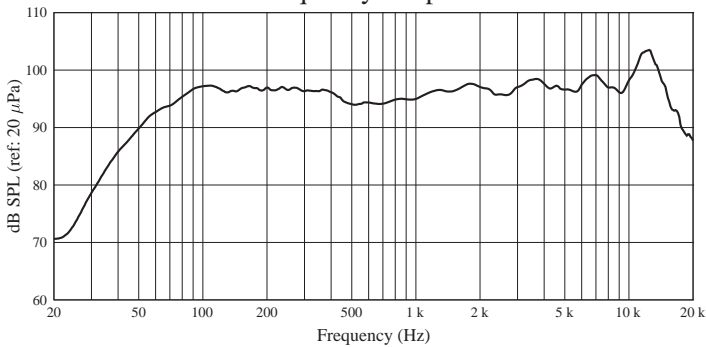
60 lbs. (27.3 kg)

## ARCHITECTS & ENGINEERS SPECIFICATION

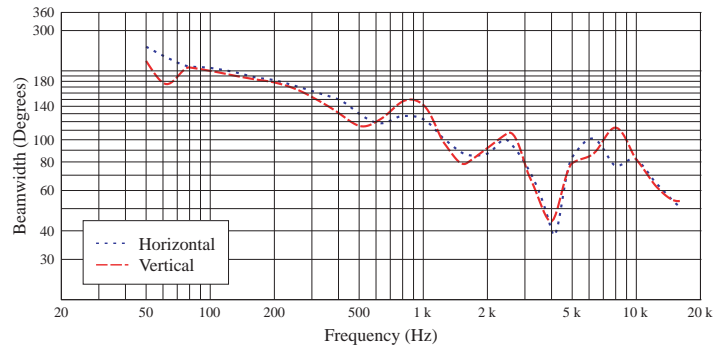
The loudspeaker system shall be a two-way multi-purpose type consisting of a 12 inch / 300mm Duplex® loudspeaker component with a 1.4" exit throat compression driver and conical horn. The crossover network shall be a dual-section, 12 dB/octave slope low pass and 12 dB/octave slope high pass with an electro-acoustic crossover frequency of 1,500 Hz. The loudspeaker system shall have an operating bandwidth of 70 Hz - 16 kHz with a sensitivity of 97 dB when measured at a distance of one meter. The power handling capability shall be 300 W AES (1,200 W peak). Nominal impedance shall be 8.0 ohms with a minimum impedance of 6.1 ohms at 190 Hz. The loudspeaker shall have nominal coverage angles of 90 degrees in the horizontal plane and 90 degrees in the vertical plane. The unit shall be a Vented Enclosure,

constructed of 18 mm Poplar plywood painted grey or white with a cloth covered metal grille. The cabinet shall include integral suspension points. Forged shoulder machinery eye bolts shall be included to facilitate the suspension of the speaker system. The dimensions shall be 22.00 inches high by 18.75 inches wide by 15.00 inches deep. The loudspeaker system shall weigh 55 pounds (25.0 kg). The loudspeaker system shall be the Altec Lansing Professional model DX1012-8AG (charcoal grey) or DX1012-8AW (white).

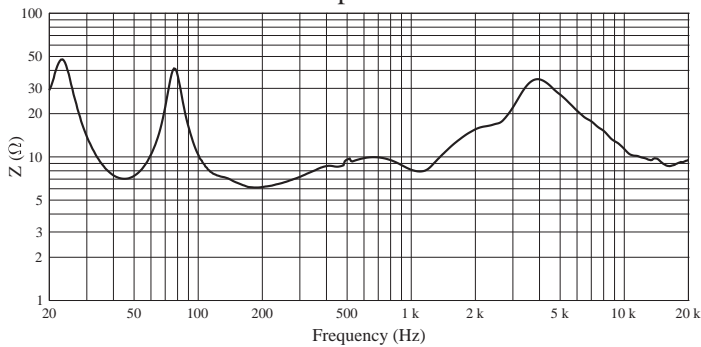
### Frequency Response



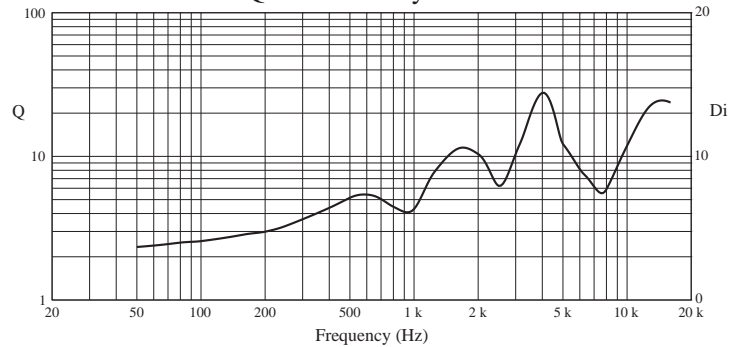
### Beamwidth



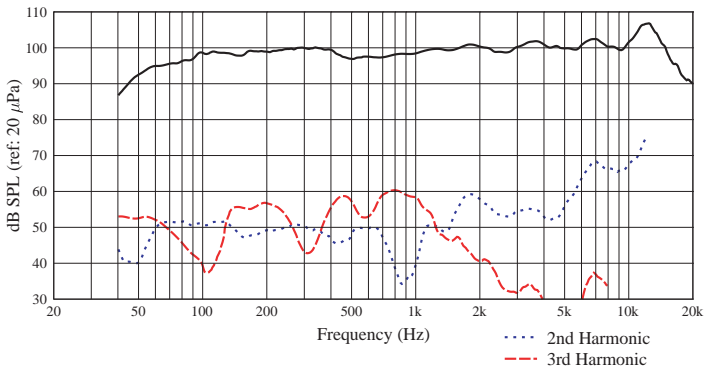
### Impedance



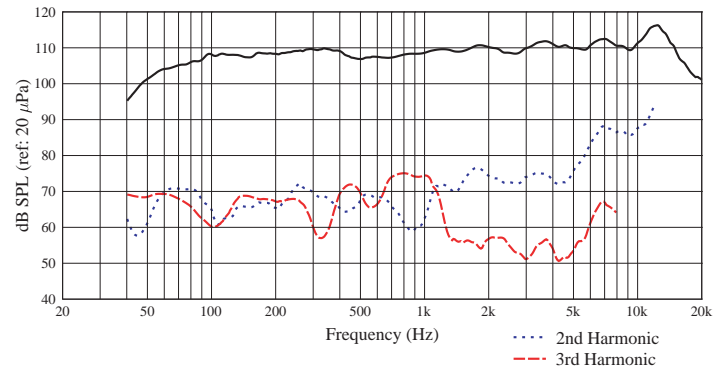
### Q & Directivity Index



### Harmonic Distortion : 1% Rated Power



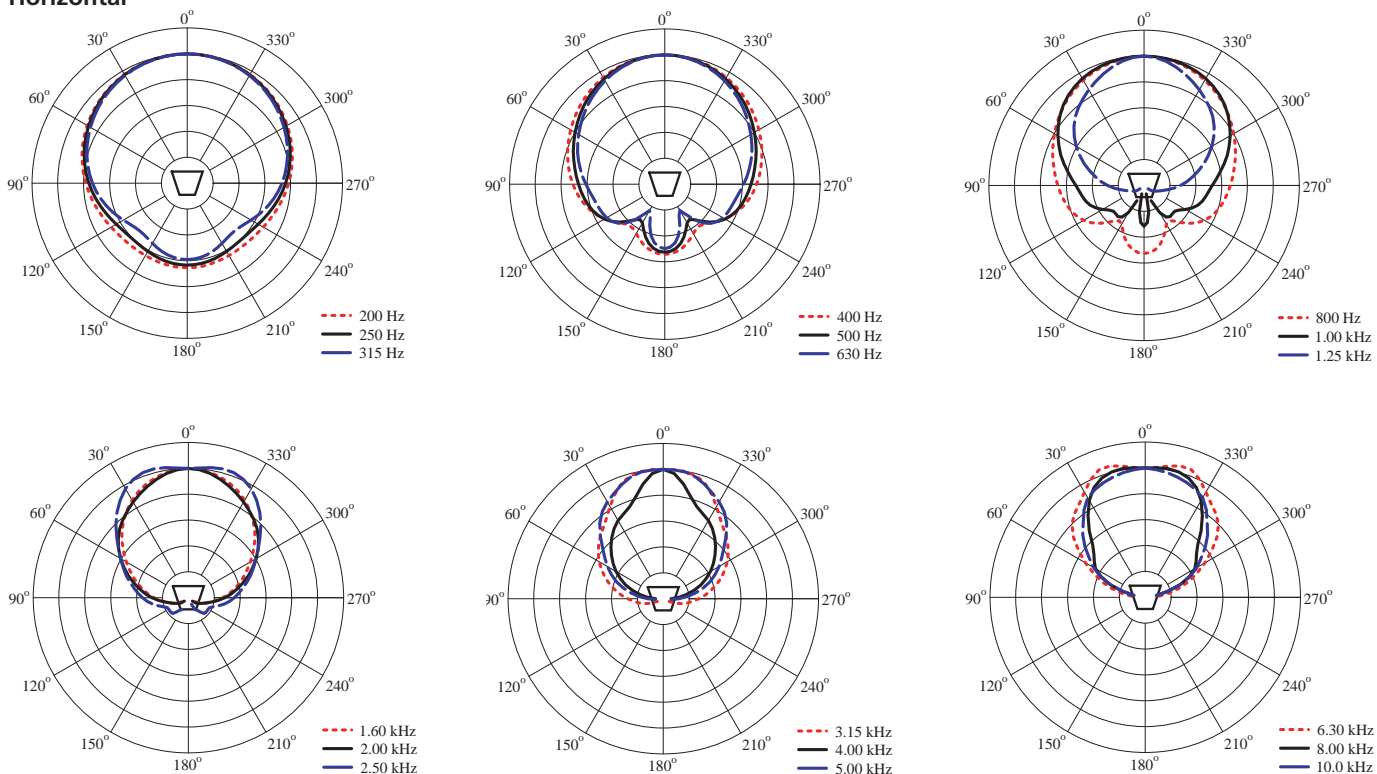
### Harmonic Distortion : 10% Rated Power



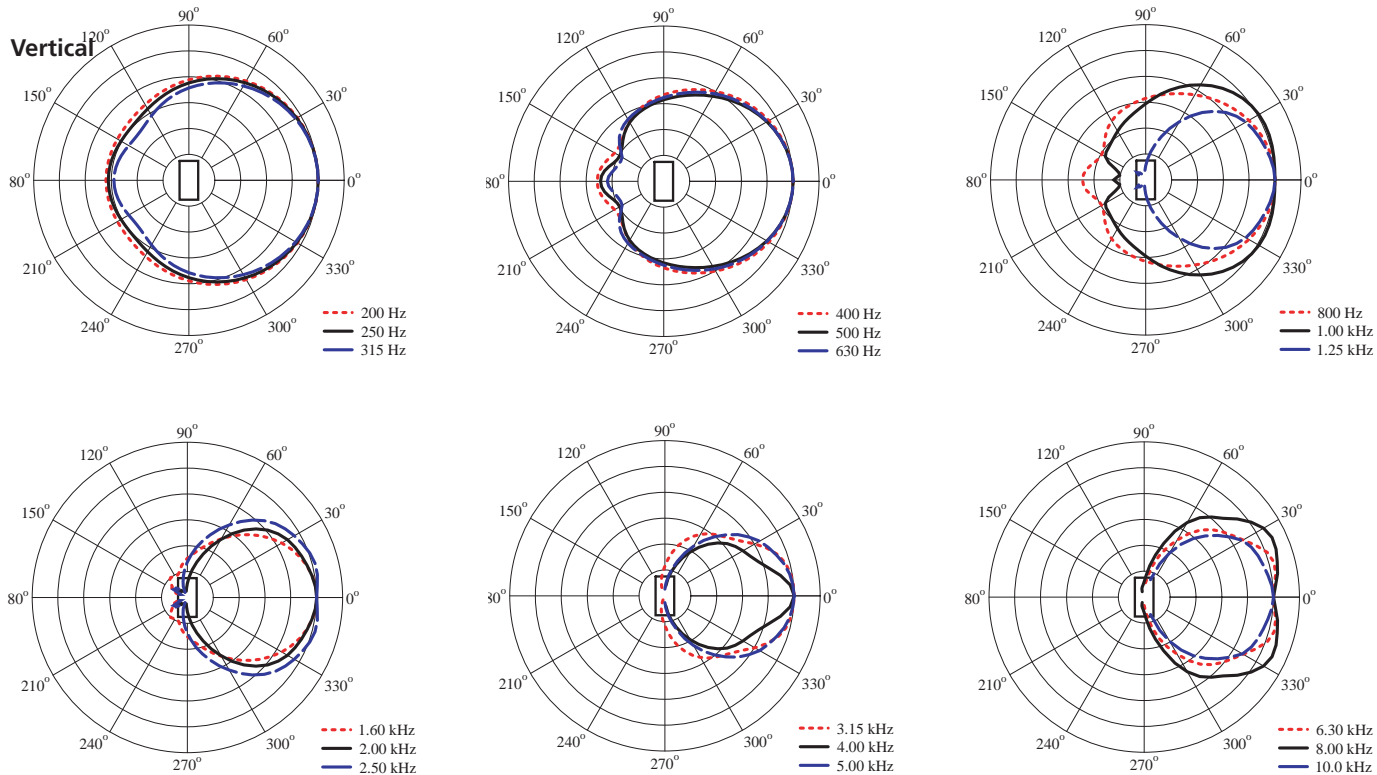
# ONE-THIRD OCTAVE POLAR RESPONSE CHARTS

## 6 dB / DIVISION

### Horizontal

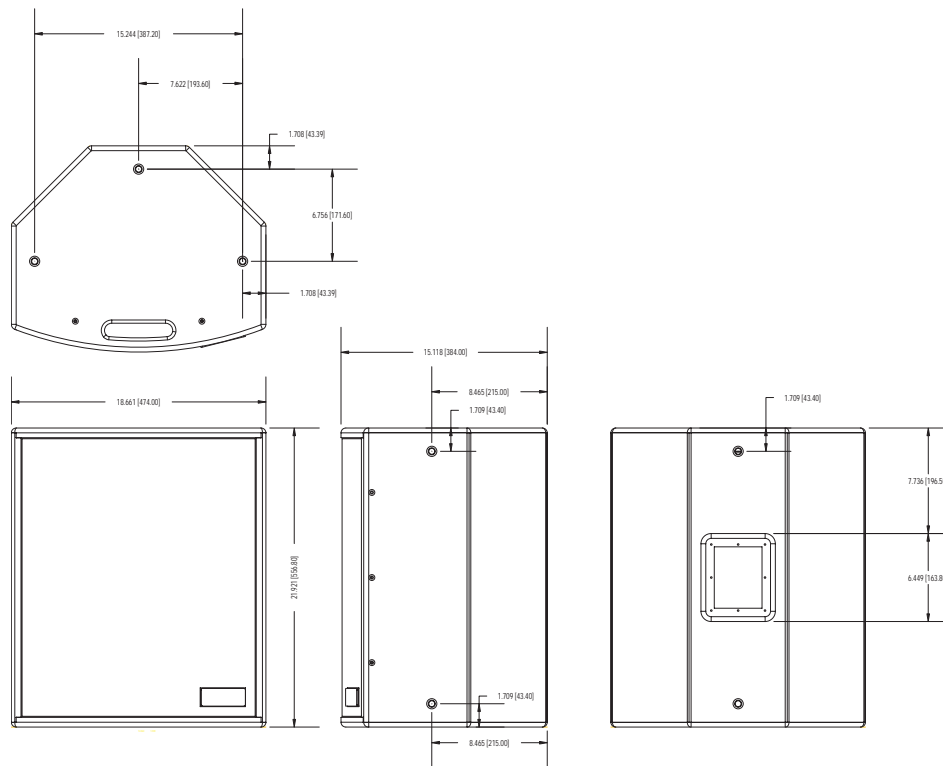


### Vertical



As we are continually striving to improve Altec Lansing products, specifications are subject to change without notice. Please visit [www.altecp.com](http://www.altecp.com) for the latest information on Altec Lansing Professional products.

## MOUNTING DIMENSIONS



## SPECIFICATION NOTES

- 1 The frequency response of the loudspeaker system is measured at a distance of no less than 3 meters to obtain full range data. The level is then corrected to be equivalent to a 2.83 V 1 m measurement. A near field measurement of the loudspeaker system is performed for frequencies below 500 Hz. This data is then combined with the full range measurement to give an accurate composite frequency response curve.
- 2 The limits of the frequency response are referenced to -3 dB of the systems rated sensitivity.
- 3 The sensitivity of the loudspeaker system is the log based average SPL taken over the intended bandwidth of operation for the system with a 2.83 V swept sine stimulus. The data is measured and level corrected in a manner consistent with note 1.
- 4 The power handling capacity of the loudspeaker system is tested using a full range form of AES Standard 2-1984. The test stimulus is band limited (40 Hz – 16 kHz) pink noise with a 6 dB crest factor. The applied RMS voltage is determined using the minimum impedance of the system. The amplifier used to drive the system has a minimum operating headroom of 6 dB referenced to the RMS voltage.
- 5 The maximum output level of the loudspeaker system is calculated based on the sensitivity and the power handling capabilities of the system.
- 6 The coverage angles for the loudspeaker system are taken as the -6 dB points of the directivity response and averaged from 500 Hz – 16 kHz.
- 7 The minimum impedance of the loudspeaker system is taken over its intended band of operation.
- 8 The distortion measurements of the loudspeaker system are performed at a distance of 1 m with RMS input voltages corresponding to 1% and 10% of rated system power handling calculated using minimum system impedance. The distortion percentages are log based averages from 300 Hz – 3 kHz.
- 9 Before attempting to suspend the loudspeaker system, consult a certified structural engineer. This loudspeaker system can fall from improper suspension, resulting in serious injury and property damage. Suspend this loudspeaker system using no less than two of its suspension points. Maximum enclosure rigging angle is 45°. Use only the correct mating hardware, forged shoulder machinery eye bolt, Mil Spec MIL 51937-3. All associated rigging is the responsibility of others.

### VISIT [WWW.ALTECPRO.COM](http://WWW.ALTECPRO.COM) FOR

- Authorized EASE® data on Altec Lansing Professional speakers.
- Specification sheets in .pdf format. Download page 1 of the specification sheet for your submittals.
- One paragraph A & E Specifications in .doc format.

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© 2004 Altec Lansing Professional  
1000 W. Wilshire Blvd., Suite 362  
Oklahoma City, Oklahoma 73116

Phone: 1-405-848-3108 • Fax: 1-405-848-3217

Web: [www.altecp.com](http://www.altecp.com) • Email: [proinfo@alteclansing.com](mailto:proinfo@alteclansing.com)